

From glowbugs@theporch.com Sat Aug 3 17:59:06 1996  
Return-Path: <glowbugs@theporch.com>  
Received: from uro (localhost.theporch.com [127.0.0.1]) by uro.theporch.com  
(8.8.Alpha.7/AUX-3.1.1) with SMTP id RAA17724; Sat, 3 Aug 1996 17:56:34 -0500  
(CDT)  
Date: Sat, 3 Aug 1996 17:56:34 -0500 (CDT)  
Message-Id: <199608032256.RAA17724@uro.theporch.com>  
Errors-To: ws4s@midtenn.net  
Reply-To: glowbugs@theporch.com  
Originator: glowbugs@theporch.com  
Sender: glowbugs@theporch.com  
Precedence: bulk  
From: glowbugs@theporch.com  
To: Multiple recipients of list <glowbugs@theporch.com>  
Subject: GLOWBUGS digest 252  
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas  
X-Comment: Please send list server requests to listproc@theporch.com  
Status: 0

#### GLOWBUGS Digest 252

Topics covered in this issue include:

- 1) Antioxidant Paste for Aluminum  
by "Barry L. Ornitz" <u856010@eastman.com>
- 2) Help!  
by Old Man <70401.134@CompuServe.COM>
- 3) Re: VFO drift and differential caps  
by wrt@eskimo.com (Bill Turner)

---

Date: Fri, 2 Aug 1996 21:14:00 -0400 (EDT)  
From: "Barry L. Ornitz" <u856010@eastman.com>  
To: Boatanchors <boatanchors@theporch.com>,  
Cc: "Rhett T. George" <rtg@ee.duke.edu>  
Subject: Antioxidant Paste for Aluminum  
Message-ID: <Pine.ULT.3.91.960802210053.19537C-100000@dua150.kpt.emn.com>

Rhett George wrote:

> Please be reminded that there is an anti-oxidant jelly available in  
> the electrical supplies area of most hardware stores for improving  
> the connection between Al cable and Cu lugs. I'll check it out for  
> use in Al boatanchor chassis and let you know.

Please do not do this. The paste (NOALOX and others) is basically a  
suspension of fine zinc particles in an organic binder. It is for

aluminum to aluminum connections ONLY where the sharp (and hard) zinc particles pierce through the aluminum oxide layer to improve electrical connections. The zinc is fairly compatible with the aluminum electrochemically. Adding copper to the connection will cause the aluminum to preferentially corrode in the presence of moisture.

The correct thing to do, as Bobbi Barmore said, is use toothed lockwashers with adequate torque to insure the teeth cut through the aluminum oxide layer and that the fit is essentially air tight. In the long run, this joint will still corrode but not nearly as quickly. In spite of the old practice of running a ground bus through all lugs, I would not recommend this. Any lug not grounded properly is asking for an instability with ground loops.

Evidently the electrical supply houses have been promoting NOALOX and such for copper to aluminum joints but the manufacturers recommendations are for aluminum to aluminum only.

73, Barry L. Ornitz WA4VZQ ornitz@eastman.com

---

Date: 02 Aug 96 23:02:47 EDT  
From: Old Man <70401.134@CompuServe.COM>  
To: Multiple recipients of 1 <GLOWBUGS@THEPORCH.COM>  
Subject: Help!  
Message-ID: <960803030246\_70401.134\_IHD89-1@CompuServe.COM>

I need the commands to change my e-mail address for the GLOWBUGS messages.  
Can anyone (or the listowner, if he's monitoring things!) let me know.  
73,  
Sandy W5TVW  
new address: w5tvw@juno.com

---

Date: Sat, 03 Aug 1996 14:16:50 GMT  
From: wrt@eskimo.com (Bill Turner)  
To: jeffd@coriolis.com  
Cc: Multiple recipients of list <glowbugs@theporch.com>  
Subject: Re: VFO drift and differential caps  
Message-ID: <32035423.52420971@mail.eskimo.com>

On Fri, 2 Aug 1996 15:50:36 -0500 (CDT), you wrote:

>Hi gang--

>  
>I bought one of those tube-era SSB manuals that ARRL used to publish at the  
>recent Flagstaff hamfest, and spent a nice planeride cruising through it  
>last week. I saw a circuit in one of the transceiver projects that I had  
>seen before but not understood--and once I understood it, definitely had the  
>Oh-Wow! effect in spades.

>  
>It's a means of adjusting for VFO drift. You put a compound capacitance in  
>parallel with your main tuning cap. This compound capacitance consists of  
>an NPO cap in series with a differential variable cap. Each of the split  
>stator sections of the differential is further in series with a cap. One  
>section goes to an N750 compensating cap, and the other to an NPO cap of  
>equal value.

<snip>

---

There is one catch, which is the same catch all temperature compensation schemes have: you must locate the capacitors at a physical location where their capacitance change will be exactly equal and opposite to whatever is causing the drift in the first place. Not easy, but possible in theory at least.

In fact, you don't need a differential capacitor to do this. Just use two separate (ordinary) variables and adjust them one at a time. Turn variable A a certain amount, then turn variable B until the frequency comes back to what it was before turning A. Then wait and see.

A simpler way to achieve vfo stability is to use a very low-powered oscillator and let it run 24 hours a day. A JFET Hartley-type is simple to build and works fine. I used one in a 40 meter mobile rig I built some years ago and never had a trace of drift. Of course, it needs to be thermally isolated from the rest of the unit.

73, Bill W7LZP  
wrt@eskimo.com

---

End of GLOWBUGS Digest 252  
\*\*\*\*\*